

US LHC Accelerator Project		Baseline Change Request
BCR Number	63	
WBS	1.1.1.5.1 IR Quadrupole Cable	
Title	Additional Quadrupole Inner Cable	
Change Control Level	2	
Originator	J. Kerby	
Date	3 May 2004	

Description of change

Twenty-eight additional unit lengths (UL) of inner quadrupole cable will be made by LBNL using surplus SSC wire from inventory. This consists of 12 UL for MQXB16-18, plus 4 UL for the possibility that a 19th MQXB may have to be made if the prototype turns out not to be usable as a replacement for MQXB04, which failed to reach the required gradient, plus 4 UL for the possibility that a 20th collared coil assembly may be made as an additional spare. A 25% allowance is included for possible rejection of coils, yielding a requirement of 25 UL. Each run on the LBNL cabling machine can make 7 UL, so four runs makes 28 UL, the number chosen

Reason for change

Some of the cable currently in inventory turns out to be mechanically unstable and cannot be used. In addition, sufficient quantity of cable should to be provided, while the cabling machine is set up for this run, to cover the possibility that we may need to make one or two additional coil sets, as noted above.

Impact on other sub-systems

None.

Impact on cost

The budget for WBS 1.1.1.5.1, IR Quadrupole Cable, is to be increased by \$32.8k, including all direct and indirect costs. The details of the cost estimate are included as an attachment to this BCR. An e-mail from Mike Barry explaining the entries is also attached.

Impact on schedule

This change does not, per se, impact the schedule, but timely cabling is required to keep the quadrupole production at Fermilab on schedule.


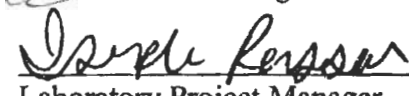
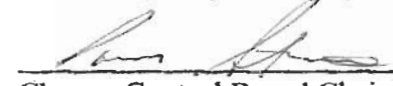

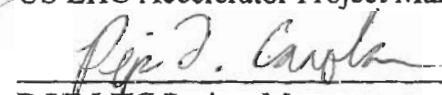
Other impacts (ES&H, etc.)

None.

Change Control Board recommendation (if required)

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Approvals

	<u>5/7/04</u>
WBS Level 3 Manager	Date
	<u>5/5/04</u>
Laboratory Project Manager	Date
	<u>5/7/04</u>
Change Control Board Chair	Date
	<u>5/7/04</u>
US LHC Accelerator Project Manager	Date
	<u>5/7/04</u>
DOE LHC Project Manager	Date
 _____ Director, DOE Division of High Energy Physics	 _____ Date

BCR 63 - Attachment 1

Date: Thu, 29 Apr 2004 14:20:33 -0400
From: "Strauss, Bruce" <Bruce.Strauss@science.doe.gov>
Subject: RE: SSC wire from LBNL
To: "'kerby@fnal.gov'" <kerby@fnal.gov>,
"Dan Dietderich (drdietderich@lbl.gov)" <drdietderich@lbl.gov>
Cc: Strait Jim <strait@fnal.gov>, HEP-TECH <HEP-TECH@science.doe.gov>,
"Pripstein, Moishe" <Moishe.Pripstein@science.doe.gov>

Dan,

Please process the request of Jim Kerby for SSC strand.

Bruce
cc
Dr. Bruce P. Strauss
SC-20/Germantown Building
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1290
T+1(301)903.3705
F+1(301)903.2597
bruce.strauss@science.doe.gov

-----Original Message-----

From: Jim Kerby [mailto:kerby@fnal.gov]
Sent: Thursday, April 29, 2004 2:10 PM
To: Strauss, Bruce
Cc: Strait Jim; Kerby Jim
Subject: Re: SSC wire from LBNL

Bruce,

we will use (by Dan Dietderich's estimation) 186.5km of SSC wire currently in inventory, to make approximately 28 UL of inner cable.

Jim Kerby

Strauss, Bruce wrote:

>Jim and Jim,
>
>By e-mail please provide me with a list of material that you require.
>
>Cheers,
>Bruce
>
>-----Original Message-----
>From: Jim Kerby [mailto:kerby@fnal.gov]
>Sent: Thursday, April 29, 2004 1:36 PM
>To: Strauss Bruce
>Cc: Kerby Jim; Strait Jim
>Subject: SSC wire from LBNL
>
>
>Bruce,
> as we discussed several months ago, to complete the Fermilab portion

BCR 63 - Attachment 1

>of the LHC Accelerator Project we would like to use already drawn wire
>from the SSC inventory at LBNL. We are on the verge of starting the
>cabling process.

>

> How formal a letter would you like from me making the request, and
>what specific details would you like me to include in said letter (I
>assume an electronic version is fine).

>

>Thanks

>

>Jim

BCR 63 - Attachment 2

Description	Total	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<input type="checkbox"/> Total Budget	32,795	0	0	0	0	0	0	0	0	28,131	4,664	0	0
<input checked="" type="checkbox"/> Total Income/Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Total FTE	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.95	0.4	0.0	0.0
<input type="checkbox"/> Total Labor	20,312	0	0	0	0	0	0	0	0	16,955	3,357	0	0
<input type="checkbox"/> Labor	20,312	0	0	0	0	0	0	0	0	16,955	3,357	0	0
<input type="checkbox"/> Detail Labor	20,312	0	0	0	0	0	0	0	0	16,955	3,357	0	0
<input type="checkbox"/> Higley, Hugh C	12,205	0	0	0	0	0	0	0	0	8,848	3,357	0	0
<input type="checkbox"/> FTE	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.0
<input type="checkbox"/> Direct cost	7,315	0	0	0	0	0	0	0	0	5,303	2,012	0	0
<input checked="" type="checkbox"/> Allocations	4,890	0	0	0	0	0	0	0	0	3,545	1,345	0	0
<input type="checkbox"/> Liggins, Nathaniel	5,833	0	0	0	0	0	0	0	0	5,833	0	0	0
<input type="checkbox"/> FTE	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.0
<input type="checkbox"/> Direct cost	3,496	0	0	0	0	0	0	0	0	3,496	0	0	0
<input checked="" type="checkbox"/> Allocations	2,337	0	0	0	0	0	0	0	0	2,337	0	0	0
<input type="checkbox"/> Diederich, Daniel R	1,376	0	0	0	0	0	0	0	0	1,376	0	0	0
<input type="checkbox"/> FTE	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
<input type="checkbox"/> Direct cost	831	0	0	0	0	0	0	0	0	831	0	0	0
<input checked="" type="checkbox"/> Allocations	545	0	0	0	0	0	0	0	0	545	0	0	0
<input type="checkbox"/> Barry, Michael J	898	0	0	0	0	0	0	0	0	898	0	0	0
<input type="checkbox"/> FTE	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
<input type="checkbox"/> Direct cost	542	0	0	0	0	0	0	0	0	542	0	0	0
<input checked="" type="checkbox"/> Allocations	356	0	0	0	0	0	0	0	0	356	0	0	0
<input type="checkbox"/> Campus Labor	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Total Non-Labor	7,122	0	0	0	0	0	0	0	0	6,506	616	0	0
<input type="checkbox"/> Procurements	540	0	0	0	0	0	0	0	0	0	540	0	0
<input type="checkbox"/> Materials	500	0	0	0	0	0	0	0	0	0	500	0	0
<input checked="" type="checkbox"/> Crates and M&S	500	0	0	0	0	0	0	0	0	0	500	0	0
<input type="checkbox"/> Services	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Burdens	40	0	0	0	0	0	0	0	0	0	40	0	0
<input type="checkbox"/> Recharges	6,582	0	0	0	0	0	0	0	0	6,506	76	0	0
<input type="checkbox"/> Space Recharge	5,689	0	0	0	0	0	0	0	0	5,689	0	0	0
<input checked="" type="checkbox"/> Bldg 52	5,689	0	0	0	0	0	0	0	0	5,689	0	0	0
<input type="checkbox"/> TEID	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Telephone Services	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Computer/Network Services	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> All Other Services	893	0	0	0	0	0	0	0	0	817	76	0	0
<input checked="" type="checkbox"/> Bldg 52 Electricity	500	0	0	0	0	0	0	0	0	500	0	0	0
<input checked="" type="checkbox"/> Eng & AFRD Recharges	393	0	0	0	0	0	0	0	0	317	76	0	0
<input type="checkbox"/> Travel/Training/Meetings	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Travel	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Training	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Meeting/Conference Expense(Net)	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Meeting/Conference Income(Net)	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Misc. Other	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Misc. Travel	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Misc. Other w/Overhead	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Misc. Other w/o Overhead	0	0	0	0	0	0	0	0	0	0	0	0	0
<input type="checkbox"/> Total Allocations	5,361	0	0	0	0	0	0	0	0	4,670	691	0	0
Fabrication Rate	5,361	0	0	0	0	0	0	0	0	4,670	691	0	0

BCR 63 - Attachment 3

Date: Fri, 30 Apr 2004 08:13:57 -0700

From: Michael Barry <MJBarry@lbl.gov>

Subject: Re: Cable run budget

In-reply-to: <409194BC.7090406@fnal.gov>

To: James Strait <strait@fnal.gov>

Cc: DRDietderich@lbl.gov, Jim Kerby <kerby@fnal.gov>, SAGourlay@lbl.gov

Jim,

Where to start... The budget does include all indirect costs. I believe that this is the first time you have seen a print out from our web based budgeting tool, so let me explain terms. Allocation is a term used here for overheads (not my choice of terms, it's hardwired into the software). In the labor area, it is a summarization of our payroll and organization burdens. The "Eng & AFRD Recharges" are for the hourly recharges associated with CAD and Shops. If you remember, our direct labor rates in Millennium include the payroll burden, org burden, and recharges and then G&A is applied. The term "Total Allocation" at the bottom is the 19.9% G&A rate that is applied to the total labor, recharges, and burden on the procurements (OH would be the equivalent in Millennium to the burden on procurements). I hope this clarifies things for you.

Mike

James Strait wrote:

> Dan, Mike,

>

> Does this budget include all indirect costs? Since this is about what
> we estimated by correcting the previous estimate for the lower "on
> project" overhead rate, I assume so, but I'd rather be explicit.

>

> What is "Eng & AFRD Recharges"? (ok, it's only \$393, so I shouldn't
> really care, but I'm curious.)

>

> What are "Allocations"? The total of all "Allocations," those listed
> under each person's name and those at the bottom under "Total
> Allocations," is \$13.5k, or more than 40% of the total \$32.8k. Naively
> this sounds like an overhead, since it appears to represent a fixed
> fraction of direct cost when listed under labor. If so, then what
> about the 19.9% rate that Mike quoted in his previous e-mail?

>

> Cheers,

> Jim